

## 6. Revised Transportation Conformity Budgets

### Key Points:

- *Provides revised (EPA-“adequate”) MOBILE5(rev) conformity budgets for 2007 and 2012 for NO<sub>x</sub> and VOC for use in testing TIPs and Regional Transportation Plans*
- *Provides overview of the expected scope, duration and application of these budgets*
- *Describes any expected impact of the new budgets on expected conformity tests during the maintenance period (eg-any likely major transportation planning or air program constraints)*
- *Defines milestones and commitments for moving rapidly toward a set of MOBILE6 based conformity budgets as needed to meet Conformity and Attainment Demonstration SIP commitments and revised federal guidance*

### **Mobile Sector Budgets Revision**

The Clean Air Act (CAA) requires a showing that regional transportation plans, and Transportation Improvement Programs, conform to the emissions budgets for the mobile sector for the milestone years of 2007 and 2012. These emissions budgets are required to be included in this plan. The conformity assessment follows a coordinated, consultative process involving the Departments of Transportation and Natural Resources, the regional planning entities for areas with air quality problems, EPA and the Federal Highway Administration.

Conformity budgets must address both VOC and NO<sub>x</sub> emissions for all ozone nonattainment areas designated under the CAA. These budgets need to reflect consistent planning assumptions between the Air Quality and Transportation planning processes and reflect the impact of emission forecasts and emission control programs incorporated into the attainment demonstration. The Mobile Sector Budgets for 2007 and 2012, incorporated in this plan are shown below.

The emission levels in the table below are similar to those used in the attainment demonstration modeling but also include revisions to the transportation conformity budgets contained in the maintenance plans for Kewaunee and Sheboygan counties. Extensive dialogue with stakeholders earlier in the process refined the mobile sector projections. The refinements reflect existing and proposed mobile sector emission control components and updated speed profiles and vehicle fleet mix for the attainment year of 2007 and the 10 year maintenance plan year of 2012. The revised budgets and projections in this maintenance plan will replace the budgets and projections that are in the Attainment Demonstration once these budgets receive a positive adequacy determination in accordance with EPA guidance of May 14, 1999 as part of the SIP review and approval process.

### **Background to the Revised Motor Vehicle Budgets for Transportation Conformity Assessment**

The Motor Vehicle Emission Budgets used in this Maintenance Plan are those agreed to during the conformity discussions between Wisconsin DNR, the non-attainment area Metropolitan Planning Organizations (MPOs) including Bay-Lake Regional Planning Commission and the Southeastern Wisconsin Regional Planning Commission, and the

Wisconsin Department of Transportation (WISDOT). Many stakeholders participated in this process.

MOBILE5a was used to calculate emissions with off-model adjustments for Phase 2 Reformulated Gasoline (NOx only), Tier 2 standards/low sulfur gasoline, and the excess emissions effect of heavy-duty diesel defeat devices.

The growth rates used for VMT were the MPO's high growth scenario for the six severe counties and the Wisconsin Department of Transportation's VMT forecast for the other four non-attainment counties. In addition, a budget buffer of an additional 7.5% for VOC was added to the emissions forecast for all 10 counties at the year 2007 and year 2012 milestones. The buffer for the 2007 NOx budget was reduced to 4.9% to adjust for changes to travel and fleet assumptions such as a greater proportion of Heavy Duty Vehicles operating in the fleet mix when compared to the attainment demonstration.

The budget buffer was incorporated to minimize the prospect of a conformity failure should unanticipated economic events lead to additional, unexpected VMT growth. In addition, the speed profiles for the fleetwide VMT were updated from those used in the attainment demonstration and the market penetration of light duty trucks (pickups, sport utilities, and minivans) was updated to match current trend of increasing ownership fraction of those vehicles within the fleet.

The following mobile sector programs and assumptions were part of the emissions modeling:

1. NOx emissions were increased in all 10 counties to account for residual emissions increases after a 90% retrofit of the defeat devices from the HDD consent decree.
2. Phase 2 RFG was assumed in the 6 Severe Non-attainment counties for 2007 and 2012.
3. An appropriate mix of Tier 0, Tier 1, and NLEV vehicles were used for 2007 and 2012 based on local data and forecasts. The default MOBILE5 distributions were not used.
4. For 2007 and 2012 low sulfur gasoline was used in all 10 counties. In the six severe counties only the incremental benefit between low sulfur gasoline and Phase 2 RFG was considered.
5. For 2007 and 2012 Tier 2 vehicles were added to the fleet at expected market penetration and use.
6. The I/M program in 7 counties (Six Severe plus Sheboygan) was modified in two substantial ways. First, OBD tests are used for MY 1996 and newer vehicles. Second, vehicles with NOx test emissions greater than the NOx cutpoints are now failed and repaired.
7. The Stage 2 vapor recovery emissions and controls are included in the area source emissions to be consistent with reporting in the 15% plan.

VOC		
	2007	2012
	With 7½% Safety Margin	With 7½% Safety Margin
Six-County Area*	31.8	21.4
Sheboygan County	3.36	2.46
Manitowoc County	5.07	5.00
Kewaunee County	0.90	0.90
Door County	1.75	1.74
All Ten Counties	42.88	31.50
Eight-County Area**	40.2***	28.86
* Kenosha, Milwaukee, Ozaukee, Racine, Washington and Waukesha Counties.		
** Six-County Area plus Sheboygan and Manitowoc Counties		
*** Does not exceed sum of current 2007 emission budgets for the Eight-County Area (32.2 for Six County Area. + 3.3 for Sheboygan County + 5.2 for Manitowoc County = 40.7)		

NOx		
	2007	2012
	With 4.9% Safety Margin	With 7½% Safety Margin
Six-County Area*	70.0	41.7
Sheboygan County	7.23	5.00
Manitowoc County	8.85	7.87
Kewaunee County	1.27	1.13
Door County	2.64	2.31
All Ten Counties	89.99	58.01
Eight-County Area**	86.1***	54.57
* Kenosha, Milwaukee, Ozaukee, Racine, Washington and Waukesha Counties.		
** Six-County Area plus Sheboygan and Manitowoc Counties		
*** Does not exceed sum of current 2007 emission budgets for the Eight-County Area (71.4 for Six County Area + 6.4 for Sheboygan County + 8.3 for Manitowoc County = 86.1)		

### ***Updating the Mobile Sector Budgets – Background on the Maintenance Budget refinement from the Attainment Demonstration levels***

The Department of Natural Resources will conduct a public hearing in Milwaukee and Manitowoc to solicit public comments on the proposed motor vehicle emission budgets (MVEB) to be used as part of the Maintenance Plan (***Draft Document – Current Hearing Dates are June 24 and 27***). These MVEB apply to the 10 county area

(Milwaukee, Racine, Kenosha, Waukesha, Washington, Ozaukee, Sheboygan, Manitowoc, Kewaunee, and Door). The budgets for the six county area were based on SEWRPC forecasts that VMT would increase in their region (excluding Walworth county) from 41,676,800 miles per average summer weekday in 1999 to 47,729,000 miles per average summer weekday in 2007. These are projected to increase to 50,735,400 miles per average summer weekday in 2012.

The projected 2007 and 2012 traffic volumes were based upon an application of SEWRPC's travel simulation model to a high growth future in the region with respect to changes in population, households and employment. The 2012 figure was derived from interpolating the modeled travel demand output between 2010 and 2020. That VMT forecast assumed implementation of the regional land use and transportation system plans, with projected growth rates of 2% per year between 1995 and 2000, 1.7% per year between 2001 and 2007, and 1.2% per year between 2007 and 2012.

Section 93.104(e)(2) of the Wisconsin transportation conformity rule requires that the conformity of the transportation plan and transportation improvement program (TIP) be re-determined within 18 months following the date of a State's initial submission of the Maintenance Plan SIP that establishes an updated MVEB. Extensive dialogue with stakeholders during the Maintenance Plan drafting process refined the mobile sector projections. The refinements reflect existing and proposed mobile sector emission control components and updated speed profiles to use for the milestone years of 2007 and 2012.

The Department met with transportation stakeholders, (WisDOT, SEWRPC, BLRPC and FHWA staff and management representatives). Those discussions noted that the motor vehicle emissions budgets for counties included in the Maintenance Plan SIP, as developed for this Plan and the public hearings, are calculated upon high economic growth in the six county area, rather than the official intermediate growth projections adopted for the long term plans. In addition to the higher growth assumption, a 7.5/4.9 percent VOC/NOx emissions growth increment was incorporated in the budgets to help prevent transportation conformity assessment failure during the plan horizon. Population projections were derived from 1998 Department of Administration calculations for Manitowoc, Kewaunee, Sheboygan and Door Counties and from SEWRPC projections for the six county area.

MOBILE 5a emission factors were adjusted based on new Tier 2/Low Sulfur Gasoline regulations, new NOx credits guidance for Phase 2 Reformulated Gasoline (from MOBILE 5b), the excess emissions effect of diesel defeat devices and estimates of impacts of the related EPA consent decree, and revised evaporative emission credit for gas cap only inspection in the Inspection/Maintenance program.

### ***Commitment to Revise the Motor Vehicle Emission Budgets based on MOBILE 6***

The State previously committed to revising the Phase 3 MVEB within one year after the release of the MOBILE 6 model by incorporating some newer emission reduction benefits and assumptions in the attainment demonstration modeling. The commitment occurred when EPA approved the earlier Phase 2 Attainment SIPs (which did not yet include modeled attainment demonstrations). The benefits primarily reflect the federal Tier 2/Low Sulfur Gasoline program,

The Department knows the estimates of Tier 2/Low Sulfur Gasoline benefits in the Phase III SIPs and portrayed in this Maintenance Plan are interim approximations and an accurate estimation requires the use of the MOBILE 6 model. Because the Department is pursuing a Maintenance Plan, revising the Phase 3 MVEB becomes moot upon EPA approval. However, the Department is committed to recalculate the Maintenance Plan budgets using MOBILE 6 in such a manner that EPA will render a budget adequacy determination on the Maintenance Plan MVEB before December 31, 2002. EPA has assured the state that that this MVEB revision to the Maintenance Plan based on the final MOBILE 6 will not trigger a separate, 18 month conformity clock.